## REMARKS

The Official Action mailed November 9, 2010, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on March 24, 2006, January 30, 2009 and November 13, 2009.

However, the Applicant has not received acknowledgment of the Information Disclosure Statement filed on January 13, 2011. The above-referenced Information Disclosure Statement appears in the Image File Wrapper and consideration of this Information Disclosure Statement is respectfully requested.

Claims 1, 2, 4, 5, 7-9, 11-13 and 15-21 were pending in the present application prior to the above amendment. Claims 1, 2, 4, 5, 7, 9, 11-13, 15, 16 and 21 have been amended to better recite the features of the present invention and new claim 22 has been added to recite additional protection to which the Applicant is entitled. Accordingly, claims 1, 2, 4, 5, 7-9, 11-13 and 15-22 are now pending in the present application, of which claims 1, 4, 7, 11, 15 and 22 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 5 of the Official Action rejects claims 1, 2, 4, 5, 7-9, 11-13, 15 and 16 as obvious based on the combination of U.S. Publication No. 2002/0126108 to Koyama, U.S. Patent No. 5,457,649 to Eichman, U.S. Patent No. 5,798,534 to Young and U.S. Patent No. 5,854,494 to Yamazaki. Paragraph 6 of the Official Action rejects claims 17-21 as obvious based on the combination of Koyama, Eichman, Young, Yamazaki and (IEEE ISBN 0-7803-1450-6) to Zhao. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2144.04, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

With respect to independent claims 1, 4, 7, 11 and 15, the prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended.

Rejected independent claims 1 and 4 are amended to recite the feature "wherein the gate electrode has a gap over the region," rejected independent claims 7 and 11 are amended to recite the feature "wherein the gate electrode has a gap over the impurity region," and rejected independent claim 15 is amended to recite the feature "wherein the gate electrode has a gap over the island shape semiconductor film." Support for the amendments can be found, for example, in Applicant's paragraphs [0052]-[0053] and FIGS. 3C, 3D, and 3E in the Patent Publication.

This gap of the gate electrode is not taught or suggested in the cited references. Moreover, Applicant takes this opportunity to bring to the Patent Office's attention that

similar claims reciting the feature of a gate electrode having a gap were allowed on January 11, 2011 in counterpart Japanese Application No. 2005-164090.

Because Koyama, Eichman, Young and Yamazaki do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained with respect to independent claims 1, 4, 7, 11 and 15. The secondary reference to Zhao does not cure the deficiencies of the primary references. Therefore, Applicant believes the rejections of claims 1, 4, 7, 11 and 15 and claims dependent therefrom are not proper.

Additionally, dependent claims 2, 5, 9 and 13 are amended to recite the feature "over the same semiconductor film," and dependent claim 16 is amended to recite the feature "over the same island shape semiconductor film." Support for the amendment can be found, for example, in paragraph [0087] and FIG. 9D in the Patent Publication.

In regards to dependent claims 2, 5, 9, 13 and 16, the Official Action alleges that Yamazaki discloses in Figs. 5A-5E that each memory cell of the memory device comprises two or more gate electrodes (65a/65b) on the same insulating film (64). However, Yamazaki does not teach or disclose gate electrodes on the same insulating film over the same semiconductor film or the same island shape semiconductor film, as claimed. Therefore, for these additional reasons, dependent claims 2, 5, 9, 13 and 16 distinguish over the applied references.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

New claim 22 has been added to recite additional protection to which the Applicant is entitled. The features of claim 22 are supported in the present specification, for example, in paragraphs [0045]-[0046]. Claim 22 recites that "the first region of the first memory cell is altered to an insulating state and the second region of the second memory cell is maintained in an initial state when applying a gate voltage to the first gate electrode of the first memory cell and the second gate electrode of the second memory cell, a first voltage to at least one of the two first wirings of the first memory cell,

and a second voltage to at least one of the two second wirings of the second memory cell, and wherein the first voltage is lower than the second voltage."

The Official Action, on page 7 alleges that Young in col. 7 lines 60-67 teaches that having a very high voltage potential would help breaking the link of the specific transistor for the purposed functioning of the semiconductor device." However, claim 22 describes a case in which the second region of the second memory cell is maintained in the initial state when a very high voltage potential is applied to the second gate electrode. This is not taught or suggested in Young or the other cited references.

Therefore, the prior art, either alone or in combination, does not teach or suggest all the features of new independent claim 22. Thus, for the reasons stated above, the Applicant respectfully submits that new claim 22 is in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized to charge fees under 37 C.F.R. §§ 1.16, 1.17, 1.20(a), 1.20(b), 1.20(c), and 1.20(d) (except the Issue Fee) which may be required now or hereafter, or credit any overpayment to Deposit Account No. 50-2280.

Respectfully submitted,

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